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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,223	03/10/2004	Nicholas James Adams	TS5581 (US)	4123
23632	7590	07/16/2007		
SHELL OIL COMPANY				
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			EXAMINER	
			SINGH, PREM C	
			ART UNIT	PAPER NUMBER
			1764	
			MAIL DATE	DELIVERY MODE
			07/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/797,223

Applicant(s)

ADAMS, NICHOLAS JAMES

Examiner

Prem C. Singh

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. Amendment to claims 1-5, and 9 and cancellation of claim 10 is noted.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ballegoy et al (WO 00/29511) in view of Chen et al (Molecular Transport and Reaction in Zeolites, Table 2.1, page 11, John Wiley and Sons, 1994).

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5. With respect to claim 1, Ballegoy invention discloses a process for the catalytic dewaxing. Ballegoy discloses, "The invention relates to a process for the catalytic dewaxing of a hydrocarbon feed comprising waxy molecules by contacting the hydrocarbon feed under catalytic dewaxing conditions with a catalyst composition comprising metallosilicate crystallites, a binder, and a hydrogenation component." (Page 1, lines 1-6). "The most preferred binder is silica." (Page 6, lines 12-13). Ballegoy also discloses that the hydrogenation component is platinum in a range of 0.1 to 5% by weight (See page 6, lines 14-34). Ballegoy discloses that the weight ratio of the metallosilicate crystallites and the binder is between 5:95 and 35:65 (See page 5, lines 20-21). Ballegoy further adds, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4). Ballegoy also discloses, "The cut point(s) of the distillate fractions is/are selected such that each product distillate recovered has the desired properties for its envisaged application. For lubricating base oils, the cut point will normally be a least 280°C and will normally not exceed 400°C, the exact cut point being determined by the desired product properties, such as volatility, viscosity, viscosity index, and pour point." (Page 17, lines 14-21).

Ballegoy invention uses MTW-type crystallites like ZSM-12 (See page 7, lines 25-28) but does not specifically mention about having pores consisting of 12 oxygen atoms.

Ballegoy invention does not specifically mention that the gas oil yield is higher than the lower boiling fraction.

Chen reference discloses in Table 2.1 that MTW crystallites have channel size 12. Since Ballegoy and Chen both use MTW, and also, Chen discloses that MTW has channel size 12, MTW disclosed by Ballegoy will also inherently have channel size 12.

Since Ballegoy invention discloses that the exact cut point of the distillates is determined by the desired product properties and the lubricating base oil has a boiling range of 280°C to 400°C and also since Ballegoy invention uses a feed with a boiling range of 202 to 587°C (Page 28, Table IX), it would have been obvious to one skilled in the art at the time the invention was made to modify Ballegoy invention and cut a lubricating base oil and a larger portion of gas oil as compared to the lighter fraction because gas oil is a more value-added product as compared to the lighter components.

6. With respect to claims 2 and 3, Ballegoy invention discloses, "The feed oil will suitably contain between about 1% and up to 100% of these waxy compounds." (Page 3, lines 4-5).

7. With respect to claim 4, Ballegoy invention discloses, "Examples of feeds having relatively high amounts of waxy compounds are .....and slack waxes." (Page 3, lines 27-32).

8. With respect to claim 5, Ballegoy invention discloses in Table I (Page 18) nitrogen content of hydrocracked waxy raffinate feed to be less than 1 ppmw.

9. With respect to claims 6 and 7, Ballegoy invention discloses, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4).
10. With respect to claim 8, Ballegoy invention discloses, "A further preferred class of aluminosilicate zeolite crystallites are of the MTW-type." (Page 7, lines 25-26).
11. With respect to claim 9, Ballegoy invention discloses, "The weight ratio of the metallosilicate crystallites and the binder is between 5:95 and 35:65." (Page 2, lines 2-3).

### ***Response to Arguments***

12. Applicant's arguments filed 05/24/2007 have been fully considered but they are not persuasive.
13. The Applicant presents arguments about the amendment to claim 1.  
The Applicant's argument is not persuasive because Ballegoy discloses each and every element of the Applicant's amended claim 1.
14. The Applicant argues that with the amendments made to the only independent claim of this application, it is submitted that the newly claimed process is directed to one

that provides the unexpected high gas oil yield from the conversion of a wax feedstock using a specifically defined catalyst.

The Applicant's argument is not persuasive because the combined teachings of Ballegoy and Chen disclose high gas oil yield and this has been addressed in the Office action above.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prem C. Singh whose telephone number is 571-272-6381. The examiner can normally be reached on MF 7:00 AM-3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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